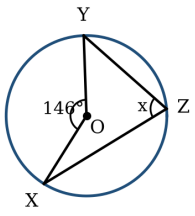
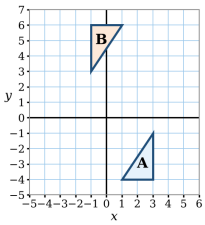
Day 231	A Tier 10-a-day
1 Here are the first four terms of a sequence. $-1, -6, -11, -16$ (a) Find an expression for the nth term. (b) Find the first term in the sequence that is less than -50.	
2 (a) Work out 0.6×0.03 (b) Work out $0.12 \div 0.06$	
3 $f(x) = 3x - 3$ $g(x) = x^2 - 7$ (a) Find $f(-3)$ (b) Find $fg(x)$. Give your answer in its simplest form.	
4 X, Y and Z are points on a circle with centre O. Angle XOY = 146°. Work out the size of angle x. Give a reason for your answer. 	
5 A spinner can land on red, blue or green. P(red) = 0.3 and P(blue) = 0.2. (a) Work out the probability that it lands on red or blue. (b) Work out the probability that it lands on green.	

Day 231 **A Tier 10-a-day**

6 Describe fully the single transformation that maps shape A onto shape B.



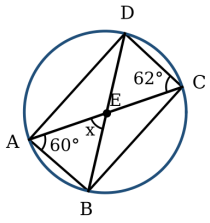
7 Simplify fully

(a) $\frac{18x^7y^5}{3x^4y^3}$

(b) $(2x^4y^4)^4$

8 A company has 70 employees in Sales, 40 in Admin and 60 in Production.
A stratified sample of 17 employees is to be taken.
Work out how many employees should be chosen from Admin.

9 A, B, C and D are points on a circle. AC and BD meet at E.
Angle BAC = 60° and angle ACD = 62°.
Work out the size of angle x (angle AEB).
Give reasons for your working.



10 A bike costs £396 including VAT at 20%. (Calculator)
Work out the price of the bike before VAT is added.